THOMAS V. JOHNSON III

NIH-Cambridge Scholar 2007 and Gates Scholar 2006

Degree: Northwestern University, B.A. Biological Sciences, 2005

Research Area: Ophthalmology; Neuroscience, Stem Cell Biology

Thomas V. Johnson III graduated summa cum laude from Northwestern with a B.A. in Biological Sciences and a minor in Chemistry in 2005. He was awarded departmental honors and the Constance Campbell Prize for his senior thesis, elected to the Phi Beta Kappa, Mortar Board, Order of Omega, and Alpha Lambda Delta honor societies, and was on the Dean's List from matriculation to graduation. He has been awarded two grants from Fight for Sight, grants from the Trinity College Eddington and Rouse Ball Research Funds, and a summer research grant from the University of Nebraska. Thomas began research in ophthalmology in the summer of 2003, when he served as a research assistant to Dr. Angelo Tanna at Northwestern University's Feinberg School of Medicine. He studied prostaglandin analogues, a medication class used to treat glaucoma, which is ranked as the leading cause of irreversible blindness worldwide. He carried out additional glaucoma research under Drs. Carl Camras and Carol Toris at the University of Nebraska where he undertook independent projects on measuring aqueous humor dynamics and the resultant intraocular pressure which is the most important risk factor for glaucoma. He presented his results at the 2006 meetings of the American Glaucoma Society and Association for Research in Vision and Ophthalmology (ARVO), and subsequently authored three manuscripts on the topic. As a research associate, Thomas also studied neuroprotection through the induction of protective autoimmunity and showed that neuroprotection in optic nerve damage is accompanied by an upregulation of T cell infiltration into the optic nerve at the injury site, findings which he presented at the 2006 National Neurotrauma Symposium (NNS), the 2007 meeting of ARVO, and in a published manuscript. Now at Cambridge University, Thomas is studying the stem cell therapy as a treatment for retinal disease. He authored a manuscript describing a novel *in vitro* tissue culture model useful for studying intraocular cell transplantation, and was awarded the Imogen Rose Memorial Prize for the best first year report in the Department of Clinical Neurosciences. Thomas has been a member of the national executive board, national treasurer, and external fundraising chairman for the Global Medical Relief Program, participated in Unite for Sight, and was founding member and treasurer of the Northwestern University Undergraduate Biology Student Association. He has also served as both president and vice-president for the Northwestern University College Libertarians. Upon graduation, he was awarded a prestigious Gates Scholarship at Cambridge and has served as the social secretary and vice president of the Gates Scholars' Society. A Shotokan karate enthusiast since the age of eight, Thomas holds a rank of shodan (black belt), and has been elected men's squad captain of the Cambridge University varsity karate team. On performing his dissertation research at the NIH, Thomas remarks that it is "a priceless opportunity for [him] to discover….how the NIH functions and to learn what it is like to perform research in a non-university setting."